



# AIRPORTS

## AS ENGINES OF ECONOMIC DEVELOPMENT

*A great airport can fuel regional economic growth.  
But if you build it, will they come? Only if you build it the right way.*

By Cyrus F. Freidheim Jr. and B. Thomas Hansson

**I**F THE CLAIM that “all roads lead to Rome” was the key indicator of that city’s economic greatness in ancient times, a modern city’s equivalent claim would have to be “all airlines land here.”

Just as in the past shipping, railway and then highway systems have played vital roles in determining a city’s economic power, global air transportation systems will do so in the future for cities, regions and countries.

Rome’s Caesar had it relatively easy. When a new road was needed,

he commanded it to be built. Modern leaders do not have that luxury. To become an international hub, a city must first have sufficient demand for air travel, the right geographic location and a highly developed infrastructure to handle passengers and freight. Yet having all three in place does not guarantee success.

Today, local or even national aviation policy decisions can make or break a city’s vision of becoming an international hub, and good policy-making is not easy. It is a complex process requiring insight into more

than local political, socioeconomic and environmental issues — often the overriding concerns of policy-makers. Sound policy also requires extensive understanding of global marketplace dynamics, the economics of airline operations and the long-term impact of policy decisions on local business and industry and consumer behavior — factors more complicated than policy-makers may think.

Some cities seem to have the right formulas. Amsterdam has clearly prospered as one of the best connecting hubs in Europe. Singapore has

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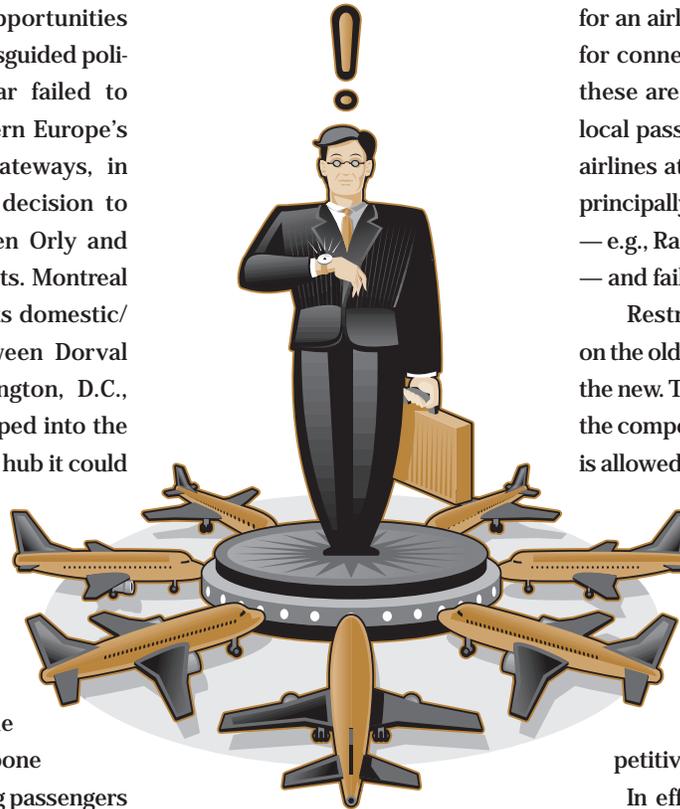
been the leading hub in Southeast Asia for some time. Hong Kong decided to invest billions of dollars in air transportation facilities and infrastructure to sustain the city's status as an international trade center.

Others have lost opportunities as a result of faulty or misguided policies. Paris has thus far failed to emerge as one of Western Europe's leading international gateways, in part as a result of its decision to split hub traffic between Orly and Charles de Gaulle airports. Montreal faltered similarly with its domestic/international split between Dorval and Mirabel. In Washington, D.C., Dulles has never developed into the international connecting hub it could have been.

At the heart of the matter is how well the airport system serves its customer base. Local passengers — those traveling to and from the hub — provide the backbone of the system; connecting passengers provide the volume to “double frequencies” and significantly increase the number of cities served. By illustration, since 60 percent of passengers at a United States hub are typically connecting, it only takes 40 percent local passengers to support a decent-sized flight. A non-hub airport will only support such a service with 80 percent to 90 percent local passengers (10 percent to 20 percent connecting passengers). The threshold for service from a non-hub city is consequently much higher than for a hub city and the frequencies that can be

supported much lower.

The key to efficient aviation policy is to create a system that serves the local and connecting passengers well. Splitting the hub system be-



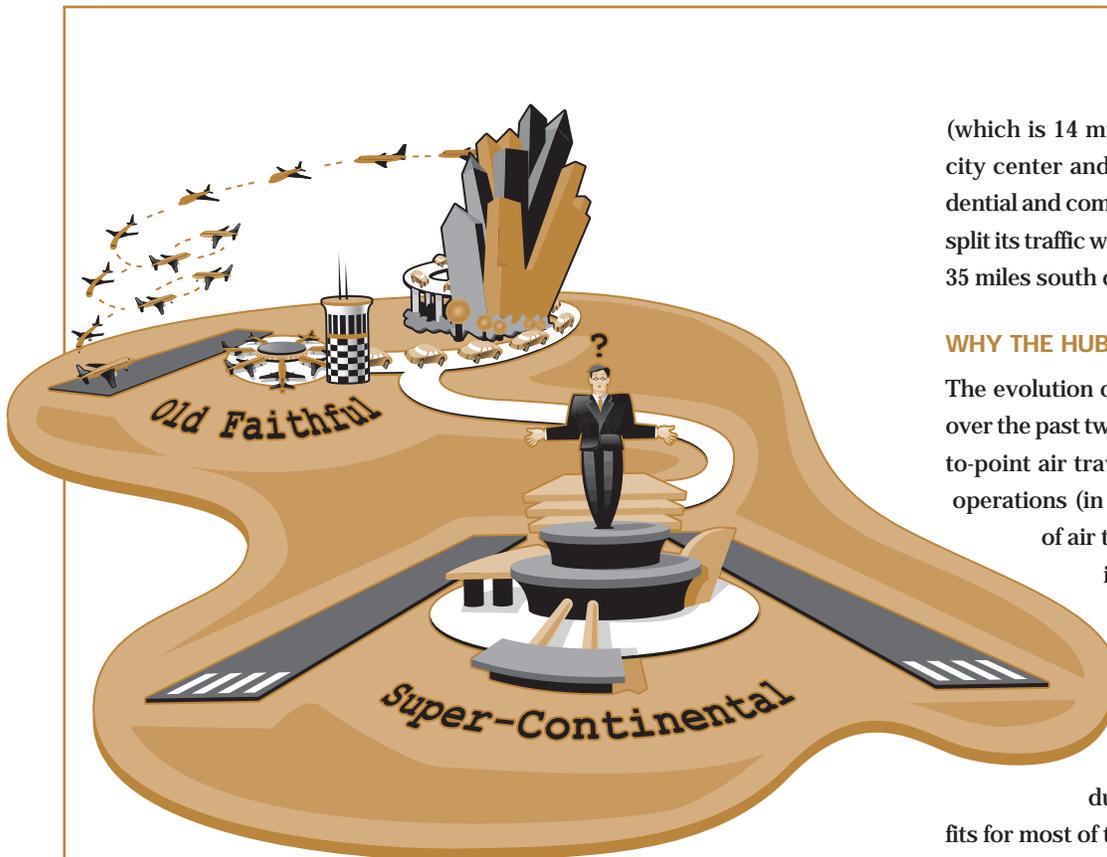
tween two airports in the same city does not do this. For example, the international connecting passenger arriving in Dulles (27 miles west of Washington) does not want to take a taxi to Ronald Reagan National Airport (very near the city center), where most North American flights are concentrated. Consumers in central Washington do not want to take a taxi to Dulles when they can use the more conveniently located Ronald Reagan National Airport. This is one of the key problems with attempts

to split a hub: given the choice, the local consumers will choose the more conveniently located (old) airport, and the distant, new airport will stand unused.

It is economically prohibitive for an airline to develop a hub solely for connecting passengers, because these are much less profitable than local passengers. In the 1980's, a few airlines attempted to establish hubs principally for connecting passengers — e.g., Raleigh-Durham and Nashville — and failed.

Restrictions are often imposed on the old airport to provide traffic for the new. The problem with this is that the component of the local traffic that is allowed to stay at the old airport remains there and the city ends up with one airport focused on, say, the long-haul traffic, and the other on short-haul traffic. This leaves the aviation system uncompetitive as a hub.

In effect, that is what has happened in New York and Washington; what may still happen in Milan, and what occurred in Montreal. In Montreal the new Mirabel Airport opened in 1975 about 35 miles north of the city, with the objective of becoming the leading international gateway in Canada. Most North American flights, however, remained at Dorval, the original airport just 20 minutes from downtown Montreal, severely limiting the connections available at Mirabel. Consequently, Mirabel's projected high volume of international traffic never materialized because of the



lack of an adequate connecting structure. Montreal lost its status as an international gateway, and spent an estimated \$4 billion to develop an airport that has now reverted to cargo and charters.

Going forward, Frankfurt and Amsterdam stand to lose their positions as leading European hubs if they fail to expand their airports effectively. Amsterdam appears further along with its expansion plans and is causing some concern in London, where the main airports need to expand to keep pace with competition, but where progress is slow and painful.

Many cities are currently wrestling with policy decisions that will directly affect their futures as international hubs. Kuala Lumpur has recently developed an international air-

port, but domestic travelers have found the airport too far from the city and taxis too expensive. Sydney is considering developing a second overflow airport and Seoul is planning to retain its old airport, focused on domestic services, when its new international airport is opened. Chicago, which has the potential to give New York stiff competition as North America's premier international gateway, is embroiled in a struggle that will determine if it will emerge as one of the world's great international metropolitan centers in the 21st century. The key to achieving that ambition is to have the preeminent international air transportation hub in North America. Chicago and Illinois are in an intense political debate over whether or not to restrict growth at O'Hare

(which is 14 miles northwest of the city center and surrounded by residential and commercial districts) and split its traffic with a proposed airport 35 miles south of the city center.

#### WHY THE HUBBUB?

The evolution of the airline industry over the past two decades from point-to-point air travel to hub-and-spoke operations (in which a high volume of air traffic is concentrated in a few large hub airports with spoke connections to numerous lower-volume destinations) has produced significant benefits for most of the stakeholders.

The airlines have reaped the economic benefits of scope and scale in their operations. Local economies of hub cities have seen upturns because of increased employment, more visitors who spend more money locally and a heightened attractiveness to new businesses that consider convenient, frequent and cost-effective air travel when deciding where to locate. Airports are magnets for business and trade. Extensive and frequent air services are critical to attracting conventions and trade shows, and play a major role in the location of corporate and regional headquarters, service companies, research and development facilities and manufacturing sites.

Great benefit has also accrued to consumers — business travelers in particular — in terms of greater choice of flights and destinations,

frequency of service, flexibility in re-scheduling and a general lowering of ancillary costs related to travel, such as avoiding the time and cost of an overnight stay. Although in the United States the rise of hub-and-spoke operations coincided with airline deregulation in the late 1970's, marketplace dynamics have been the true drivers of the concept's acceptance and success worldwide. Simply put, a hub-and-spoke system works better for nearly everyone in Europe, the United States and Asia.

In the United States, the airline economy is still primarily domestic. The future will be tied to becoming an international hub. Some European and Asian communities have already figured this out and acted accordingly.

"Hubbing" in Europe is not about forcing passengers to connect via Frankfurt when traveling from Stockholm to London. It is about providing frequent and convenient one-stop connections to medium-sized international destinations that cannot support direct service from cities such as Stockholm (plus connecting smaller and medium-sized European cities). In Europe, a few major interior cities have emerged as the key European and international hubs. Frankfurt, for example, has direct service to more than 100 destinations outside Europe. In the United States, the key

international connecting points are on the coasts: New York, Los Angeles and Miami. Chicago, by contrast, has direct service only to some 25 to 30 destinations outside North America. If a passenger wants to go to Chicago from Vienna, a stopover in New York or a European connecting point is required.

Chicago's potential for economic growth does not lie in the domestic market; it already provides nonstop services to more North American destinations than any other United States airport system. The economic growth potential is in international service, where Chicago ranks fourth in the United States, far short of New York and Miami and somewhat behind Los Angeles. Chicago is not missing out on Cleveland's business; it is missing out on business from Europe and Asia.

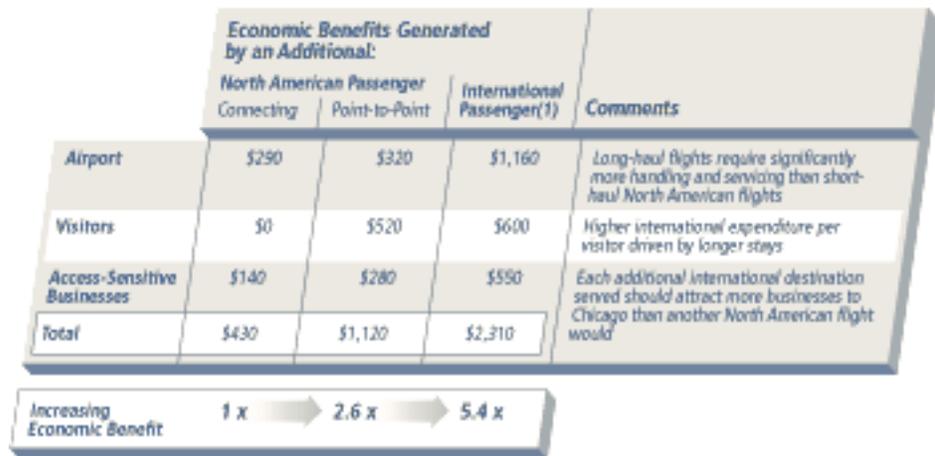
Consider the economic impact of this relatively low level of international service. A recent Booz-Allen & Hamilton study conducted for the Chicagoland Chamber of Commerce found that the total value to the local economy of a single international passenger at Chicago's O'Hare International Airport is five to six times greater than that of a North American connecting passenger: \$2,310 compared with \$430. (See Exhibit I.)

The message for Chicago and for the many cities worldwide with similar ambitions to capture the economic value of international air travel and to become global trade centers is the same: aggressively pursue international hub status.

**WHO WILL OR CAN WIN?**

Policy-makers should realize that

**EXHIBIT I  
ECONOMIC BENEFITS BY TYPE OF TRAFFIC  
O'HARE INTERNATIONAL AIRPORT — 1997**



Note: (1) Long-haul international flights (Canadian, Mexican and Caribbean flights are counted as North American)

Sources: PEA/ACG studies, Booz-Allen & Hamilton analysis

there are at least three basic requirements for becoming a major hub, whether domestic or international: sufficient local consumer demand, good geographic location and the necessary infrastructure to support high-volume traffic. When these three conditions exist, the difference between cities that succeed and those that fail often boils down to which city can craft and execute sound aviation policy.

What goes into sound aviation policy? Policy-makers must consider the priorities of and their policies' impact on the four Cs:

- The consumer who wants diverse and frequent services at low prices.
- The community that seeks both a high quality of life and jobs.
- The country that can suffer balance of trade and commercial isolation problems from poor policy.
- The carriers that will succeed in, or fail at, emerging as leaders in their industry, taking their hub cities with them.

In the best of all possible worlds, policy-makers would maximize the benefits for all the stakeholders. In the process their policies would foster the creation of a hub so strong that any airline could fly there and that competition — not regulation — would control service levels and pricing.

We do not live in an ideal world. Policy-makers in cities around the world face a range of complex challenges: noise and pollution concerns, limited airport capacity, aging infrastructure and resistance to high fares. Typically, there are three scenarios

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**ABANDON THE OLD AND BUILD THE NEW**

In some cases, building a new airport and closing or refocusing the old facility, as was done in Denver, may be the only rational alternative, but it is rife with both economic and social considerations. First, there is the issue of the enormous investment required just to build the new airport facility, not to mention the cost of the necessary infrastructure, such as

roads and mass transit, to support it. Second, major economic dislocations can result:

- If the new airport is built far away from the old one, then hotels, convention centers and businesses that were developed near the old airport may become obsolete. Even apartments and houses built for people wanting locations convenient to the airport are impacted. Occupancy, lease rates and property prices can decline as the old location becomes less attractive.
- Economic development around the new facility is often relatively slow in coming.
- The new airport can be very distant from the city center and be very expensive to use (in terms of landing fees, taxi rides, etc.), concerns that have, for example, been raised in Denver.

**SPLIT AIRPORT OPERATIONS**

Hubs are aviation systems with significant economies of scale and scope, and all prior attempts to split hubs have failed. There are, however, a number of cities with a two- or even three-airport system that are effective hubs. A clear distinction can be drawn between multi-airport cities with effective hubs, such as Chicago, Dallas and Houston, and those with ineffective hub structures, such as Washington, New York, London and Paris. The successful cities have one primary hub and a secondary airport focused on point-to-point traffic to and from the city. In each case, the local traffic base is large enough to support both airports; the primary hub is

significantly larger than the secondary airport, and the secondary airport is focused on a different customer segment (i.e., it is not an overflow hub). The less successful multi-airport systems have two primary airports, often with legal or other restrictions imposed to separate traffic between them. As is clear from Exhibit II, the “multi-hub cities” have not become hubs at all, but have largely become focused on local traffic and have failed to attract a proportionate share of connecting traffic. Just imagine the traffic potential of London, Paris, Washington or New York if they could attract one connecting passenger for every local (i.e., 50 percent connecting traffic).

Splitting a hub is not an attractive policy alternative. What will tend to happen is that the old hub will become more and more focused on local traffic, and services to medium-sized locations will get crowded out,

thereby curtailing growth. This is certainly what is happening in London and what may happen in Chicago. A constrained O’Hare would not emerge as the international hub it could become if allowed to expand. Flights from medium-sized international cities to Chicago can carry as much as 80 percent connecting passengers. With capacity limits, the effective cost of slots will go up and the availability of seats for connecting passengers will diminish, reducing the attractiveness of Chicago as a connecting point (this will be true whether the current changes in slot regulation come through or not).

**MAINTAIN AND GROW AN EXISTING STRONG HUB**

The recent study that Booz-Allen & Hamilton conducted for the Chicagoland Chamber of Commerce demonstrates how this scenario would play out for Chicago, which

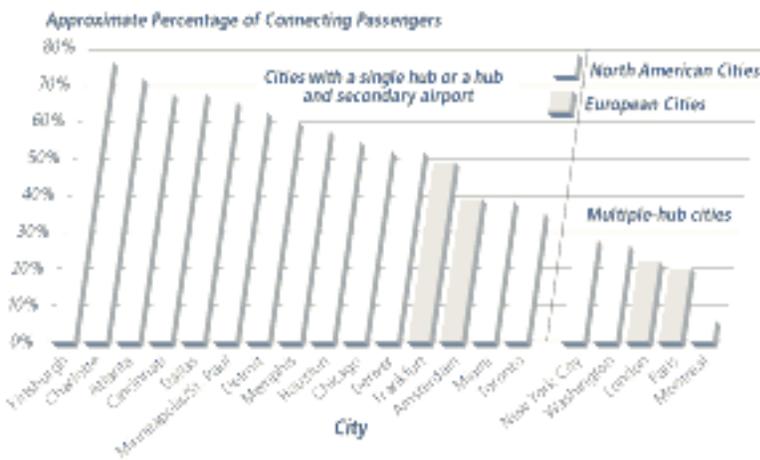
now faces the choice of maintaining O’Hare as a single, strong hub or building a new, second airport farther south in Illinois to split traffic.

As is the case in many other cities, Chicago’s growth will be tied to international service. Currently, Chicago has a relatively low share of international traffic. Passengers from cities such as Athens, Lisbon, Taipei and Beijing currently must connect through New York, Los Angeles or non-domestic locations such as London, Amsterdam, Frankfurt and Tokyo. Passengers from many of the international cities that O’Hare does serve are offered limited frequencies and often choose to connect to their North American destinations through other gateways because of inconvenient schedules or flights that are full.

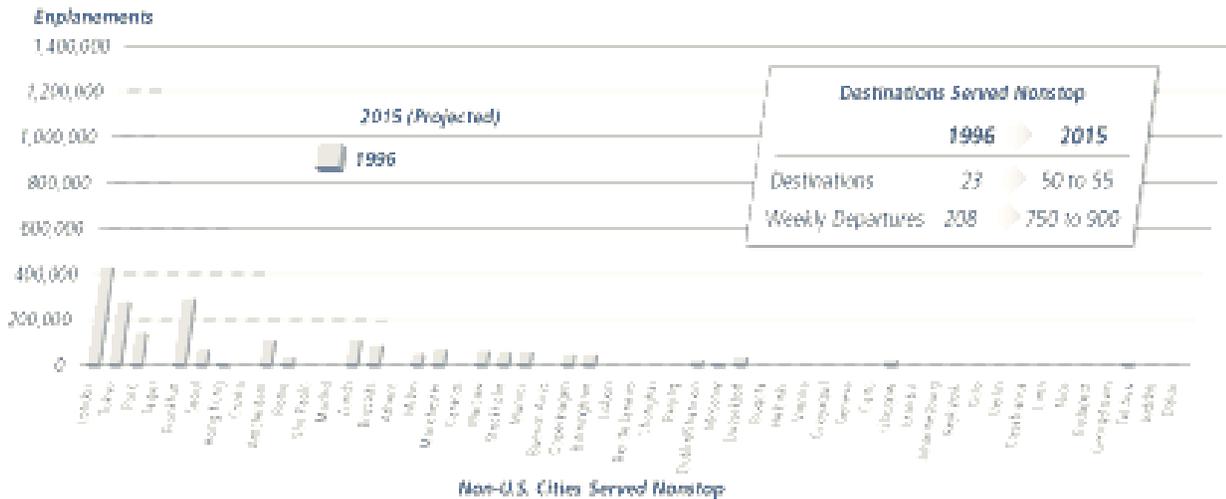
A broad range of cities are close to the threshold traffic level required to support direct service to Chicago, provided a reasonable share of connections to the rest of the United States can be captured. Exhibit III (see next page) shows the forecasted traffic for the year 2015 between several major international cities and Chicago compared with the actual traffic between Chicago and those cities in 1996. Such growth would not only create direct airport and travel-related employment, but would also make Chicago more attractive as a center of international commerce. Booz-Allen’s estimates indicate that such international growth could contribute \$17 billion to greater Chicago’s economic output by the year 2015.

The study concluded that because hub traffic is not divisible or

**EXHIBIT II  
CONNECTING TRAFFIC LAGS AT MULTIPLE HUB CITIES**



Source: Various



Source: Booz-Allen & Hamilton analysis

**EXHIBIT III  
CAPTURING INTERNATIONAL TRAVELERS AT CHICAGO'S SINGLE HUB**

transferable across airports, a single strong hub is a requirement for building international traffic and sustaining Chicago's position as a premier transportation center.

The Chicago study also found that Chicago's second airport, Midway (which focuses on meeting local point-to-point — not connecting — air travel demand), contributes significantly to the local economy and encourages price competition. Lower-priced airlines, such as Southwest and others that base their operations at Midway, stimulate local point-to-point demand and impose significant price discipline on O'Hare — similar to that imposed by low-priced carriers at other hubs. Current investments by Southwest and the airline's experience elsewhere suggest that growth may continue for some time. The study recommended that the city insure continued development of

point-to-point traffic to maintain such market-driven price competition by adding capacity at Midway and other regional airports. What Chicago decides will certainly be critical to its future as a world-class trade center.

**NO EASY ANSWERS**

Aviation policy is difficult: Community pressures to reduce noise and control pollution are intense and well understood. The economic cost of the all-too-popular decision to constrain growth or develop impractical overflow airports is not understood. Similarly, consumer pressures for lower fares tend to be directed at carriers and their successful hubs, rather than policy-makers for building insufficient or incorrect airport capacity. Policies aimed at breaking up effective hubs may be more damaging to consumers and communities than policies aimed at providing effective additional ca-

capacity for point-to-point, low-priced hub carriers.

Airline carriers based in stagnating hubs can choose to stagnate themselves or refocus growth initiatives elsewhere, through capacity additions in another location or by leveraging alliance partners. Either way, carriers focused on constrained hubs are unlikely to become the global leaders of air transportation.

The prize is clear: Which communities, cities, carriers and countries will win? In North America, the question is which community will emerge as an international metropolitan center of the 21st century. In parts of Europe and Asia, the question is which countries will enjoy the greatest economic growth — for air transportation will remain a magnet for business and commerce.

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